



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D3662-1

Job Sheet 195259



Part No: D3662-1

Job Qty: 100 pcs

Part Name: Crossbolt Spacer



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 5/16/19

Job Tracking No:

Created By: Kimberley Guerin

Due Date: 9/6/19

Description:

Type: Stock /

Note: DWG REV A IPP A 08.02.04 Now turned on Cobra EC

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard	Workcenter/Supplier	Sign-off
					Setup Run Hrs Hrs	Workcenter / Supplier Lead Time	
130	Purchasing	100 pcs	9/6/19	9/6/19	0.00 0.00	Purchasing - 1	
					2	Purchasing - 2	
					X100	Purchasing - 3	
							SEP 17 2019
140	Packaging 2-1 - Receive - B4B	100 pcs	9/6/19	9/6/19	0.00 0.00	Packaging 2 - 1 - B4B	
						Packaging 2 - 2 - B4B	
						Packaging 2 - 3 - B4B	
						Packaging 2 - 5 - B4B	
						Packaging 2 - 4 - B4B	
						Packaging 2 - 6 - B4B	
						Packaging 2 - 7 - B4B	
						Packaging 2 - 8 - B4B	
						Packaging 2 - 9 - B4B	
						Packaging 2 - 10 - B4B	
						Packaging 2 - 11 - B4B	
						Packaging 2 - 12 - B4B	
						Packaging 2 - 13 - B4B	
						Packaging 2 - 14 - B4B	
						Packaging 2 - 15 - B4B	
						Packaging 2 - 16 - B4B	
						Packaging 2 - 17 - B4B	
						Packaging 2 - 18 - B4B	
						Packaging 2 - 19 - B4B	
						Packaging 2 - 20 - B4B	
						Packaging 2 - 21 - B4B	
						Packaging 2 - 22 - B4B	
						Packaging 2 - 23 - B4B	
						Packaging 2 - 24 - B4B	
						Packaging 2 - 25 - B4B	
						Packaging 2 - 26 - B4B	
						Packaging 2 - 27 - B4B	
						Packaging 2 - 28 - B4B	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Container No: S214249



Part: D3662-1

Job No: 195259

Serial No/Batch: S214249

Revision:

Inspector:

Exp Date:

Instructions: Various STC's

Date: 09/17/19

5/16/2019

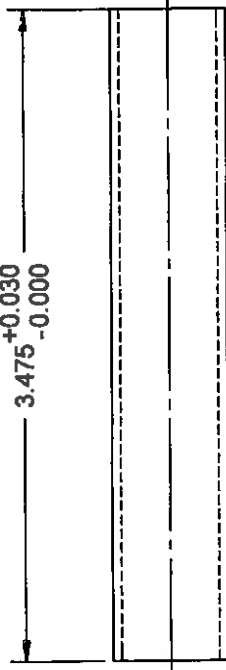
[Dart Hawkesbury] Job Sheet - Guerin, Kimberley

				Packaging 2 - 29 - B4B	
				Packaging 2 - 30 - B4B	
				Packaging 2 - 31 - B4B	
				Packaging 2 - 32 - B4B	
				Packaging 2 - 33 - B4B	
				Packaging 2 - 34 - B4B	
				Packaging 2 - 35 - B4B	
				Packaging 2 - 36 - B4B	
150 QC 6	100 pcs	9/6/19	0.00 0.00	QC 6 - 9	
				QC 6 - 68	DAS
				QC 6 - 61	81
				QC 6 - 40	9-89
160 Packaging 3-1 - Stock - B4B	100 pcs	9/6/19	0.00 0.00	Packaging 3 - 1 - B4B	
				Packaging 3 - 2 - B4B	
				Packaging 3 - 3 - B4B	
				Packaging 3 - 4 - B4B	
				Packaging 3 - 5 - B4B	
				Packaging 3 - 6 - B4B	
				Packaging 3 - 7 - B4B	
				Packaging 3 - 8 - B4B	
				Packaging 3 - 9 - B4B	
				Packaging 3 - 10 - B4B	
				Packaging 3 - 11 - B4B	
				Packaging 3 - 12 - B4B	
				Packaging 3 - 13 - B4B	
				Packaging 3 - 14 - B4B	
				Packaging 3 - 15 - B4B	
				Packaging 3 - 16 - B4B	
				Packaging 3 - 17 - B4B	
				Packaging 3 - 18 - B4B	
				Packaging 3 - 19 - B4B	
				Packaging 3 - 20 - B4B	
				Packaging 3 - 21 - B4B	
				Packaging 3 - 22 - B4B	
				Packaging 3 - 23 - B4B	
				Packaging 3 - 24 - B4B	
				Packaging 3 - 25 - B4B	
				Packaging 3 - 26 - B4B	
				Packaging 3 - 27 - B4B	
				Packaging 3 - 28 - B4B	
				Packaging 3 - 29 - B4B	
				Packaging 3 - 30 - B4B	
				Packaging 3 - 31 - B4B	
				Packaging 3 - 32 - B4B	
				Packaging 3 - 33 - B4B	
				Packaging 3 - 34 - B4B	
				Packaging 3 - 35 - B4B	
				Packaging 3 - 36 - B4B	
170 QC 21 - SA	100 pcs	9/6/19	0.00 0.00	QC 21 - SA - 21	DAS
				QC 21 - SA - 70	21
				QC 21 - SA - 53	9-89
Part Op 130 - ISSUE P/O: _____ SUPPLIER: E.T.M. INDUSTRIES INC. MANUFACTURE AS PER DWG Descriptions: C OF C IS REQUIRED 160 - (Identify as per dwg & Stock Location: _____) ***STOCK IN SKIDTUBE CELL*** 170 - (QC21- Final Inspection - Work Order Release)					
Job BOM					
Part / Item	Component Name	Quantity	Operation	Container	
D3662-1P	Crossbolt Spacer	100 (1 ea)	130-Purchasing	5214747	

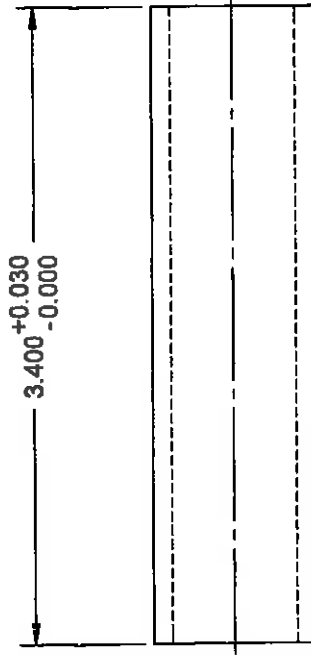
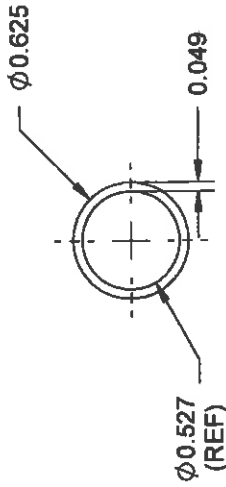
Plex 5/16/19 11:59 AM Dart.Guerin.Kimberley

Job Allocations				
Operation	Component Part	Required	Inventory	Allocated
130-Purchasing	D3662-1P	100	0	0
Part Specifications				
Specifications could not be found.				

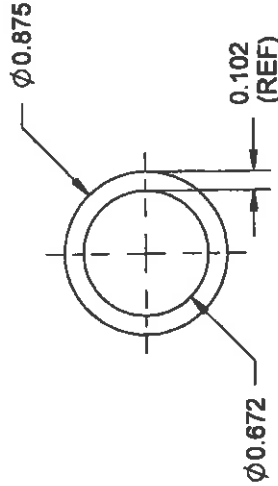
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D3662-1 CROSS BOLT SPACER



D3662-3 CROSS BOLT SPACER



NOTES:

- 1) MATERIAL:
D3662-1 - ALUMINUM 6061-T6/T62
TUBING PER VW-T-700/6 OR AMS 4080/4082
OR QQ-A-200/8 OR QQ-A-225/8
(REF. DART MATERIAL SPEC. M6061T6T0.625WQ.49)
D3662-3 - ALUMINUM 6061-T6 (OR 6061-T6510/T6511/T62)
ROUND BAR PER AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)
OR PER AMS-QQ-A-200/8 (OR AMS 4160)
(REF. DART MATERIAL SPEC. M6061T6RX.XXX)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: D3662-1 - 0.03 LBS
D3662-3 - 0.08 LBS

RELEASED
R 07-11-22/12

A	NEW ISSUE	DESCRIPTION	PH	BY	DATE
REV.					
DESIGN					
DRAWN					
CHECKED					
MFG. APPR.					
APPROVED					
DE APPR.					
DATE	07.04.20				
DART AEROSPACE USA, INC.					
PORT HADLOCK, WA					
DRAWING NO. D3662					
TITLE CROSS BOLT SPACER					
SCALE 1:1					
REV. A SHEET 1 OF 1					
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Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB043485



REVISED

Supplier: ETM001-VC
E.T.M. Industries Inc.
310 Hall Avenue, Box 610
Renfrew
ON
K7V 4E7 Canada
Phone: 613-432-6136
Fax: 613-432-8212

PO No: POHB043485
PO Date: 5/16/19
Due Date: 9/6/19
Purchase Order
Revision:
Revision Date:
Ship-To Contact: Guerin, Kimberley
Phone: 613-632-5200 Ext: 298
kguerin@dartaero.com

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground
Pymt Terms: Net 30
Freight Terms:
Special Comments:

Items													
Line Item	Job	Part	Supplier Part No	Item No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	195251	D3490-5P			Crossbolt Spacer : as per Dwg D3490-5P RevA	Firmed -		9/6/19	100 Ea	0 Ea	100 Ea	\$3.45/Ea	\$345.00
AUG 30 2019 DP													
Line Item Note: Material WW-T-700/6 can be use													
2	195252	D4170-1P			Bushing : as per Dwg D4170-1P RevB	Firmed -		9/6/19	100 Ea	0 Ea	100 Ea	\$4.50/Ea	\$450.00
AUG 30 2019 DP													
3	195253	D2971P			Crossbolt Spacer : as per Dwg D2971 RevA1	Firmed -		9/6/19	50 Ea	0 Ea	50 Ea	\$6.25/Ea	\$312.50
SEP 12 2019 DP													
4	195256	D2973P			Crossbolt Spacer : as per Dwg D2973 RevA	Firmed -		9/6/19	30 Ea	0 Ea	30 Ea	\$18.50/Ea	\$555.00
SEP 12 2019 DP													
5	195257	D3504-1P			Crossbolt Spacer : as per Dwg D3504-1 RevC	Firmed -		9/6/19	100 Ea	0 Ea	100 Ea	\$4.75/Ea	\$475.00
SEP 12 2019 DP													

Plex 8/22/19 8:54 AM Dart.Guerin.Kimberley



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB043485



Items

Items													
Line Item	Job	Part	Supplier Part No	Item No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
6	195258	D3504-3P			Crossbolt Spacer : as per Dwg D3504-3 RevC	Firmed	-	9/6/19	30 Ea	0 Ea	30 Ea	\$12.50/Ea	\$375.00
						X30			SEP 12 2019				DP
7	195259	D3662-1P			Crossbolt Spacer : as per Dwg D3662-1 RevA	Firmed	-	9/6/19	100 Ea	0 Ea	100 Ea	\$4.65/Ea	\$465.00
						X100			SEP 17 2019				DP
8	195265	D5512-1P			Crossbolt Spacer : as per Dwg D5512-1 RevA	Firmed	-	9/6/19	100 Ea	0 Ea	100 Ea	\$4.00/Ea	\$400.00
9	195264	D3286-3P			Spacer : as per Dwg D3286-3 RevA	Firmed	-	8/23/19	45 Ea	0 Ea	45 Ea	\$11.00/Ea	\$495.00
						X45			AUG 22 2019				DP
10	199400	D3286-3P			Spacer : as per Dwg D3286-3 RevA	Firmed	-	9/6/19	5 Ea	0 Ea	5 Ea	\$11.00/Ea	\$55.00
Grand Total:													\$3,927.50

Order Notes

Procurement Quality Clauses
A005 RIGHT OF ENTRY
A008 FIRST ARTICLE INSPECTION (FAI) BY SELLER, (DOCUMENTATION SENT TO DART AEROSPACE)
A012 CHEMICAL AND PHYSICAL TEST REPORTS
A016 PERSONNEL QUALIFICATION
A017 RAW MATERIAL IDENTIFICATION (AS APPLICABLE)
A026 CERTIFICATION OF MATERIAL CONFORMANCE
A041 QUALITY MANAGEMENT SYSTEM
A042 DART NOTIFICATION BY SUPPLIER
A043 RETENTION OF QUALITY DOCUMENT

A048 COUNTERFEIT PARTS AVOIDANCE, DETECTION, MITIGATION AND DISPOSITION PROGRAM

A049 SUPPLIER AWARENESS

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 8/22/19 8:54 AM Dart.Guerin.Kimberley

E.T.M. INDUSTRIES INC.
310 HALL AVENUE
BOX 610
RENFREW, ON K7V 4E7
Canada

Ph: 613-432-6136

Fax: 613-432-8212

Pack List

Number: 144098

Date: 11-Sep-19

To

DART AEROSPACE
1270 ABERDEEN STREET
HAWKESBURY, ON K6A 1K7
Canada

Ship To

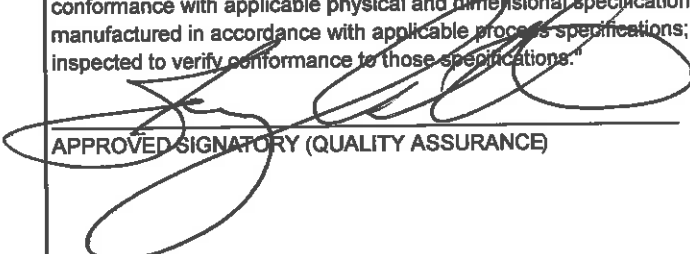
DART AEROSPACE
1270 ABERDEEN STREET
HAWKESBURY, ON K6A 1K7
Canada

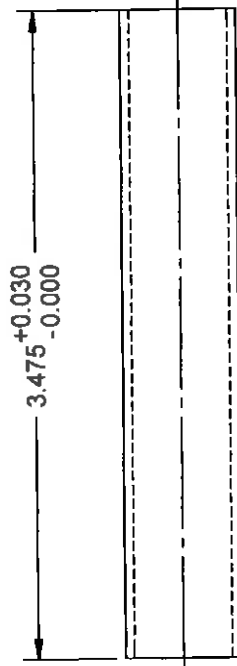
Ph: 613-632-5200

Fax: 613-632-5246

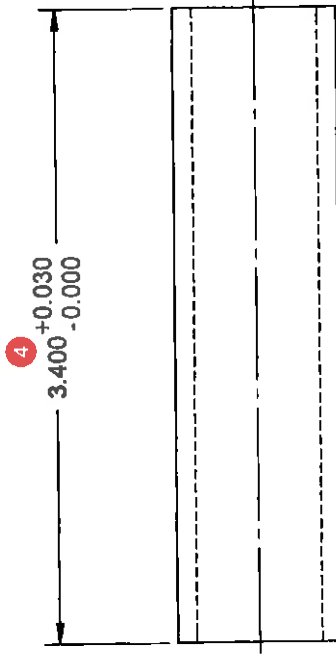
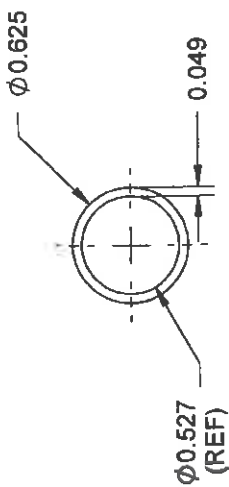
Ph: 613-632-5200

Fax: 613-632-5246

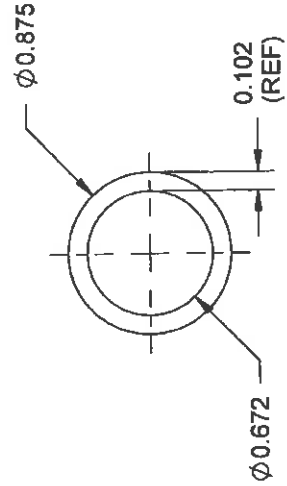
Terms		Ship Via	
Net 30 days			
Quantity	Description		
100 each	Part: D3662-1P CROSSBOLT SPACER SO: 25663 **lot #107192	Rev: A	PO: POHB043485 Line: 007
CERTIFICATE OF COMPLIANCE: "I hereby certify that the material described above is in conformance with applicable physical and dimensional specifications; that it was manufactured in accordance with applicable process specifications; and has been inspected to verify conformance to those specifications."  APPROVED SIGNATORY (QUALITY ASSURANCE) RECEIVED SEP 16 2019 DART AEROSPACE LTD.			



D3662-1 CROSS BOLT SPACER



D3662-3 CROSS BOLT SPACER



- NOTES:
- 1) MATERIAL: ALUMINUM 6061-T6/T62 TUBING PER WW-T-700/6 OR AMS 4080/4082 OR QQ-A-200/8 OR QQ-A-225/8 (REF. DART MATERIAL SPEC. M6061T6T0.625W0.49) ALUMINUM 6061-T6 (OR 6061-T651/T6510/T6511/T62) ROUND BAR PER AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116) OR PER AMS-QQ-A-200/8 (OR AMS 4160) (REF. DART MATERIAL SPEC. M6061T6RX.XXX)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: NONE
 - 7) WEIGHT: D3662-1 - 0.03 LBS D3662-3 - 0.08 LBS

CONTROLLED COPY

RELEASED
R 67-11-22/124

A	NEW ISSUE	DESCRIPTION	PH	DATE
REV.			BY	DATE
DESIGN				
DRAWN				
CHECKED				
MFG. APPR.				
APPROVED				
DE APPR.				
DATE	07.04.20			

DART AEROSPACE USA, INC.	REV. A
PORT HADLOCK, WA	SHEET 1 OF 1
DRAWING NO. D3662	SCALE 1:1
TITLE CROSS BOLT SPACER	

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ETM Industries Inc

AS9102 Revision B First Article Inspection
Form 1: Part Number Accountability

Page 1 of 3

1. Part Number D3662-1P	2. Part Name CROSSBOLT SPACER	3. Serial Number N/A	4. FAI Number N/A
5. Part Revision Level REV. A	6. Drawing Number D3662	7. Drawing Revision Level REV.A	8. Additional Changes N/A
9. Manufacturing Process Reference 107192	10. Organization Name ETM Industries Inc.	11. Supplier Code N/A	12. P.O. Number POHB043485, LN007
13. Detail FAI ☒ Assembly FAI ☐	14. Full FAI ☒ Partial FAI ☐ Reason for Partial FAI: Not Applicable		
Baseline Part Number including Revision Level N/A			
a) If above part number is a detail part only, go to Field 19 b) If above part number is an assembly, go to the "Index" section below.			
INDEX of part numbers or sub assembly numbers required to make the assembly noted above.			
15. Part Number N/A	16. Part Name N/A	17. Part Serial Number N/A	18. FAI Report Number N/A
1) Signature indicates that all characteristics are accounted for; meet drawing requirements or are properly documented for disposition.			
2) Also indicate if the FAI is complete per Section 5.4: ☒ FAI Complete ☐ FAI Not Complete			
19. Signature Mike Morin		20. Date 9/04/19	
21. Reviewed by		22. Date	
23. Customer Approval		24. Date	

AS9102 Revision B First Article Inspection

Form 2: Product Accountability – Raw Material, Specifications and Special Process(es),
Functional Testing

1. Part Number D3662-1P	2. Part Name CROSSBOLT SPACER	3. Serial Number N/A			4. FAI Report Number N/A
5. Material or Process – Name	6. Specification Number	7. Code	8. Special Process Supplier Code	9. Customer Approval Verification (Yes/No/N/A)	10. Certificate of Conformance Number
MAKE FROM; ALUMINUM	ALUMINUM 6061-T6/T62 TUBING PER WW-T-700/6 OR AMS 4080/4082 OR QQ-A-200/8 OR QQ-A-225/8 (REF DART MATERIAL SPEC M6061T6T0.625W0.49)	N/A	N/A	N/A	KAISER ALUMINUM FABRICATED PRODUCTS: LOT #F00301622
11. Functional Test Procedure Number	12. Acceptance report number, if applicable				
Not Applicable	Not Applicable				
13. Comments					
14. Prepared By Mike Morin			15. Date 9/04/19		

ETM Industries Inc

AS9102 Revision B First Article Inspection

Form 3: Characteristic Accountability, Verification and Compatibility Evaluation

Page 3 of 3

1. Part Number D3662-1P	2. Part Name CROSSBOLT SPACER	3. Serial Number N/A	4. FAI Report N/A				
Characteristic Accountability		Inspection / Test Results					
5. Char. No.	6. Reference Location	7. Characteristic Designator	8. Requirement	9. Results	10. Designated Tooling	11. Non Conformance Number	14. Reference Documents
1	SHEET 1 of 1	N/A	ALUMINUM 6061-T6/T62 TUBING PER WW-T-700/6 OR AMS 4080/4082 OR QQ-A-200/8 OR QQ-A-225/8 (REF DART MATERIAL SPEC M6061T6T0.625W0.49)	ACCEPT	KAISER ALUMINUM FABRICATED PRODUCTS: LOT #F00301622	N/A	C of C # F00301622
2	SHEET 1 of 1	N/A	TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED	ACCEPT	VERIFY	N/A	N/A
3	SHEET 1 of 1	N/A	BREAK SHARP EDGES: 0.005 TO 0.010 MAX	ACCEPT	VERIFY	N/A	N/A
4	SHEET 1 of 1	N/A	3.475 +0.030/0.000	3.490	Vernier	N/A	N/A

The signature indicates that all characteristics are accounted for; meet drawing requirements or are properly documented for disposition.

12. Prepared By

Mike Morin

13. Date

9/04/19

KAISER ALUMINUM

FABRICATED PRODUCTS

Best in Class

CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

KAISER ALUMINUM
FABRICATED PRODUCTS, LLC
6573 W. WILLIS ROAD
CHANDLER, AZ 85226

CUSTOMER PO NUMBER: M49406336-1		CUSTOMER PART NUMBER: 42506		PRODUCT DESCRIPTION: Drawn Seamless Tube/Pipe	
KAISER ORDER NUMBER: 229390	LINE ITEM: 001	SHIP DATE: 06/10/2019	KAISER LOT NUMBER: F00301622	ALLOY: 6061	TEMPER: T6
WEIGHT SHIPPED: 511.000 LB	QUANTITY: 410.000 PCS	B/L NUMBER: 233811	DIAM/DAF/THKNS:	WIDTH:	LENGTH: 12.000 FT
SHIP TO: TW METALS INC 235 WEST TUBEWAY DRIVE CAROL STREAM, IL 60188 USA			SOLD TO: TW METALS INC 760 CONSTITUTION DRIVE SUITE 204 EXTON, PA 19341 USA		

DAS
81
9-89

DAS
81
9-89

Actual Physical Properties

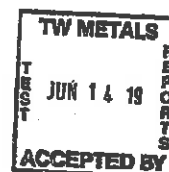
REFERENCE	DASH#	SAMPLE#	UTS (KSI)	YTS (KSI)	ELONG%	HARDNESS	CON%IACS	BEND
F00301622	0001	0001	48.7	41.1	20.0	N/A	N/A	N/A
F00301622	0002	0001	48.5	40.9	20.0	N/A	N/A	N/A

Chemical Composition (wt%), Aluminum Remainder

LIMITS	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Bi	Zr	Ea	Tot
Maximum	0.80	0.70	0.40	0.15	1.20	0.35	0.25	0.15	NA	NA	NA	0.05	0.15
Minimum	0.40	0.00	0.15	0.00	0.80	0.04	0.00	0.00	NA	NA	NA	0.00	0.00
D3154A	.59	.29	.24	.05	.98	.10	.07	.03	.00	.00	.00	.01	.02

Applicable Requirements:

Description: OD: 0.6250"; Wall: 0.0490"; Round @
AMS4082P AMS-WW-T-700/6C ASTM B210-12 WW-T-700/6F
WE TAKE EXCEPTION TO PARA. 5.2.1., Per AMS4082P, WAS NOT OILED.
This Product Complies to FAR BAA, DFARS BAA, FAR TAA
COMPLIES TO DIN EN 10204 JAN 2005
No Weld Repair. Mercury Free.



Miscellaneous Notes

MANUFACTURED IN USA MELTED IN USA
MATERIAL COMPLIES WITH FAR BAA (FAR 52.225-1, BUY AMERICAN ACT- SUPPLIES), DFARS BAA
(DFARS 252.225-7001 BUY AMERICAN ACT & BAL OF PAYMENTS PROG), AND FAR TAA (FAR 52.225-5
TRADE AGREEMENTS).

Plant Serial: 00031880
Kaiser Order Number: 229390
Line Item: 001

KAISER
ALUMINUM
FABRICATED PRODUCTS

Best in Class

CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

KAISER ALUMINUM
FABRICATED PRODUCTS, LLC
6573 W. WILLIS ROAD
CHANDLER, AZ 85226

CERTIFICATION

Kaiser Aluminum Fabricated Products, LLC ('Kaiser') hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms & conditions of sale. Test reports are on file subject to examination.

Nathaniel Stevens, Quality Manager

Nathaniel Stevens

